

1 **IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

2 Priority Application Serial No.09/496,318
 3 Priority Filing Date February 1, 2000
 4 Applicant Microsoft Corporation
 5 Priority Group Art Unit 2755
 6 Priority Examiner
 7 Attorney's Docket No. MS1-740US
 8 Title: Description Template Language for Universal Plug and Play Devices

9 **PRELIMINARY AMENDMENT**

10 To: Commissioner of Patents and Trademarks
 11 Washington, D.C. 20231

12 From: Lewis C. Lee (Tel. 509-324-9256; Fax 509-323-8979)
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16 **In the Title:**

17 Please delete the title and substitute the following new title:

18 **--XML-BASED LANGUAGE DESCRIPTION FOR CONTROLLED DEVICES--.**

19 **In the Specification:**

20 Page 1, beneath the heading "RELATED APPLICATION DATA", please
 21 delete lines 3-5 and substitute the following:

22 This is a continuation of U.S. Patent Application Serial No. 09/496,318,
 23 entitled "Dynamic Self-Configuration For Ad Hoc Peer Networking", filed
 24 February 1, 2000, which is based on provisional application number 60/139,137
 25

1 filed June 11, 1999, and provisional application number 60/160,235 filed October
2 18, 1999.

3
4 Page 13, line 25, change "Sink,." to --Sink.-- .
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1 **In the Claims:**

2 Kindly cancel claims 1-24 without prejudice.

3 Please add the following new claims 25-57.

4
5 25. (New) A method comprising:

6 creating a definition of a controlled device using an XML-based language;

7 and

8 storing the definition on at least one computer-readable medium.

9
10 26. (New) A method as recited in claim 25, wherein the storing
11 comprises storing the definition on a computer-readable medium resident at the
12 controlled device.

13
14 27. (New) A method as recited in claim 25, wherein the storing
15 comprises storing at least part of the definition on a computer-readable medium
16 located remotely from the controlled device.

17
18 28. (New) A method as recited in claim 25, further comprising
19 generating a control message from the controlled device, the controlled message
20 being generated in accordance with the definition.

21
22 29. (New) A method as recited in claim 25, wherein the creating
23 comprises:

24 creating a device portion of the definition that defines attributes of the
25 controlled device; and

1 creating a service portion of the definition that defines one or more services
2 exposed by the device.

3
4 30. (New) A method as recited in claim 29, wherein the storing
5 comprises:

6 storing the device portion on a first computer-readable medium resident at
7 the controlled device; and

8 storing the service portion on a second computer-readable medium located
9 remotely from the controlled device, but accessible over a network.

10
11 31. (New) A method as recited in claim 29, further comprising making
12 both the device portion and the service portion available at runtime over a
13 network.

14
15 32. (New) A method of dynamically self-bootstrapping a computing
16 device onto a peer network, comprising:

17 storing a definition of the computing device, the definition being written
18 using an XML-based language; and

19 making the definition available to other computing devices on the network.

20
21 33. (New) One or more computer-readable media having stored thereon
22 a description of a device that is configured to dynamically bootstrap itself onto a
23 peer network, the description comprising:

24 a first set of XML-based code strings that define attributes of the device;
25 and

1 a second set of XML-based code strings that define one or more services
2 exposed by the device.

3
4 34. (New) A computer-readable medium as recited in claim 33, wherein
5 the first set of XML-based code strings contain a reference to the second set of
6 XML-based code strings.

7
8 35. (New) A computer-readable medium as recited in claim 33, wherein
9 the first set of XML-based code strings contain a reference to the second set of
10 XML-based code strings.

11
12 36. (New) A computer-readable medium as recited in claim 33, wherein
13 the first set of XML-based code strings is stored on a first computer-readable
14 medium and the second set of XML-based code strings are stored on a second
15 computer-readable medium separate from the first computer-readable medium.

16
17 37. (New) A computer-readable medium as recited in claim 33, wherein
18 the second set of XML-based code strings comprises at least one or more universal
19 resource locators to one or more locations that host one or more descriptions of the
20 one or more services.

21
22 38. (New) A data structure stored on one or more computer-readable
23 media that is instantiated in accordance with a schema, the schema comprising:

24 a device description written in an XML-based language to describe a
25 controlled device; and

1 a service description written in an XML-based language to describe at least
2 one service supported by the controlled device.

3
4 39. (New) A computer-readable medium as recited in claim 38, wherein
5 the device description is stored at a first location and the service description is
6 stored at a second location remote from the first location, but accessible via a
7 network.

8
9 40. (New) A computer-readable medium as recited in claim 33, wherein
10 the device description contains a reference to the service description.

11
12 41. (New) A computer-readable medium as recited in claim 33, wherein
13 the device description contains at least one other device description nested therein.

14
15 42. (New) A dynamically self-bootstrapping computing device
16 comprising:

17 a description, written in an XML-based language, that describes how to
18 remotely operate the computing device; and

19 description means, responsive to a description request received by the
20 computing device on a network, for sending a description message based on the
21 description that defines interaction via data messaging with the computing device
22 over the network.

23
24 43. (New) A dynamically self-bootstrapping computing device as recited
25 in claim 42, wherein the description comprises a device description to describe

1 attributes of the computing device and a service description to describe one or
2 more services exposed by the computing device.

3
4 44. (New) A dynamically self-bootstrapping computing device as recited
5 in claim 43, wherein the device description and the service description are located
6 remotely from one another and separated by a network.

7
8 45. (New) A dynamically self-bootstrapping computing device as
9 recited in claim 42, wherein the device description and the service description are
10 made available at runtime over the network.

11
12 46. (New) A dynamically self-bootstrapping computing device as
13 recited in claim 42, wherein the description comprises multiple descriptions that
14 describe how to remotely operating multiple computing devices logically
15 contained within the computing device.

16
17 47. (New) A dynamically self-bootstrapping computing device as recited
18 in claim 42, wherein the description is a first description, further comprising a
19 second description, written in an XML-based language, that describes how to
20 remotely operate another computing device, the second description being nested
21 within the first description.

22
23 48. (New) A computing device comprising:
24 a memory;
25

1 self-describing data stored in the memory and written in an XML-based
2 language, the self-describing data describing how to operate the computing device;
3 and

4 a processor coupled to the memory to submit the self-describing data to
5 remote entity on a network.

6
7 49. (New) A computing device as recited in claim 48, wherein the self-
8 describing data comprises first data to describe attributes of the computing device
9 and a second data to describe one or more services exposed by the computing
10 device.

11
12 50. (New) A computing device as recited in claim 48, wherein the self-
13 describing data comprises device data to describe attributes of the computing
14 device and one or more universal resource locators to one or more services
15 exposed by the computing device.

16
17 51. (New) An architecture for an ad hoc peer network, the architecture
18 comprising:

19 multiple controlled devices configured to dynamically self-bootstrap onto
20 the network, individual controlled devices comprising a device description to
21 describe attributes of the computing device and a service description to describe
22 one or more services exposed by the computing device, the device and service
23 descriptions being written in an XML-based language; and

24 one or more user control points to initiate communication with the
25 controlled devices over the network.

1
2 52. (New) An architecture as recited in claim 51, wherein the device
3 description and the service description for an associated controlled device are both
4 stored on the associated controlled device.
5

6 53. (New) An architecture as recited in claim 51, wherein the device
7 description and the service description for an associated controlled device are
8 stored separately from one another so that the device description is stored on the
9 associated controlled device and the service description is stored remotely from
10 the associated controlled device, but is accessible via the network.
11

12 54. (New) An apparatus comprising:
13 means for storing a definition of a controlled device, the definition being
14 written using an XML-based language; and
15 means for making the definition available to other computing devices on
16 the network.
17

18 55. (New) An apparatus as recited in claim 54, wherein the storing
19 means stores multiple definitions of multiple controlled devices.
20

21 56. (New) An apparatus as recited in claim 54, wherein the definition
22 contains a device description to describe attributes of the controlled device and a
23 service description to describe one or more services exposed by the controlled
24 device.
25

1 57. (New) An apparatus as recited in claim 54, wherein the definition
2 contains multiple device descriptions, each describing a different set of attributes
3 of the controlled device.
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REMARKS

Applicant respectfully requests entry of the above preliminary amendment
prior to examination of the application.

Respectfully Submitted,

Dated: March 16, 2001

By: 

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